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## REMARKS

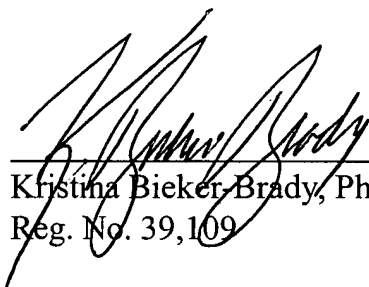
Applicants have added new claims 22-24. New claim 22 finds support, for example, at page 16, lines 8-19, and at page 35, lines 11-15, and new claims 23 and 24 find support, for example, at page 20, lines 17-20, of the specification. In addition, Applicants submit that SDS and SSC are standard acronyms in the art of molecular biology and, therefore, one skilled in this art would know that SDS refers to sodium dodecyl sulfate and that SSC is a solution of sodium chloride and sodium citrate (see, for example, Ausubel et al. Current Protocols in Molecular Biology, John Wiley & Sons, New York, 1995, A.2.4 (copy enclosed)). No new matter has been added by these amendments.

If there are any charges or any credits, please apply them to Deposit Account No. 03-2095.

Respectfully submitted,

Date:

March 23, 2004



Kristina Bieker-Brady, Ph.D., P.C.  
Reg. No. 39,109

Clark & Elbing LLP  
101 Federal Street  
Boston, MA 02110  
Telephone: 617-428-0200  
Facsimile: 617-428-7045

**Table A.2.2** Preparation of 0.1 M Sodium and Potassium Acetate Buffers<sup>a</sup>

Desired pH	Solution A (ml)	Solution B (ml)
3.6	46.3	3.7
3.8	44.0	6.0
4.0	41.0	9.0
4.2	36.8	13.2
4.4	30.5	19.5
4.6	25.5	24.5
4.8	20.0	30.0
5.0	14.8	35.2
5.2	10.5	39.5
5.4	8.8	41.2
5.6	4.8	45.2

<sup>a</sup>Adapted by permission from CRC, 1975.

**Sodium phosphate buffer, 0.1 M**

*Solution A:* 27.6 g  $\text{NaH}_2\text{PO}_4 \cdot \text{H}_2\text{O}$  per liter (0.2 M).

*Solution B:* 53.65 g  $\text{Na}_2\text{HPO}_4 \cdot 7\text{H}_2\text{O}$  per liter (0.2 M).

Referring to Table A.2.3 for desired pH, mix the indicated volumes of solutions A and B, then dilute with  $\text{H}_2\text{O}$  to 200 ml. (See Potassium phosphate buffer recipe for further details.)

**SSC (sodium chloride/sodium citrate), 20×**

3 M NaCl (175 g/liter)

0.3 M  $\text{Na}_3\text{citrate} \cdot 2\text{H}_2\text{O}$  (88 g/liter)

Adjust pH to 7.0 with 1 M HCl

**STE buffer**

10 mM Tris-Cl, pH 7.5

10 mM NaCl

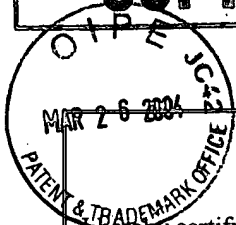
1 mM EDTA, pH 8.0

**Table A.2.3** Preparation of 0.1 M Sodium and Potassium Phosphate Buffers<sup>a</sup>

Desired pH	Solution A (ml)	Solution B (ml)	Desired pH	Solution A (ml)	Solution B (ml)
5.7	93.5	6.5	6.9	45.0	55.0
5.8	92.0	8.0	7.0	39.0	61.0
5.9	90.0	10.0	7.1	33.0	67.0
6.0	87.7	12.3	7.2	28.0	72.0
6.1	85.0	15.0	7.3	23.0	77.0
6.2	81.5	18.5	7.4	19.0	81.0
6.3	77.5	22.5	7.5	16.0	84.0
6.4	73.5	26.5	7.6	13.0	87.0
6.5	68.5	31.5	7.7	10.5	90.5
6.6	62.5	37.5	7.8	8.5	91.5
6.7	56.5	43.5	7.9	7.0	93.0
6.8	51.0	49.0	8.0	5.3	94.7

<sup>a</sup>Adapted by permission from CRC, 1975.

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**PATENT**  
**ATTORNEY DOCKET NO. 01997/521003**

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Christine M. Colbert  
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*Christine M. Colbert*  
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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant:	Rajesh Ranganathan et al.	Art Unit:	1632
Serial No.:	09/717,743	Examiner:	Joseph T. Woitach
Filed:	November 21, 2000	Customer No.:	21559
Title:	A NOVEL SEROTONIN-GATED ANION CHANNEL		

Commissioner for Patents  
P.O. Box 1450  
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**REPLY TO FINAL OFFICE ACTION**

In reply to the final Office Action that was mailed in connection with the above-captioned patent application on June 13, 2003, Applicants submit the following  
  
Amendment and Remarks.

Kindly amend the application as follows.

Amendments to the Claims:

Claim 1 (Currently Amended): A substantially pure nucleic acid sequence encoding a serotonin-gated anion channel, wherein said anion channel is regulated by serotonin binding and selectively permits passage of anions from one side of said channel to the other.

Claim 2 (Canceled).

Claim 3 (Original): The nucleic acid sequence of claim 1, wherein said serotonin-gated anion channel is a chloride channel.

Claim 4 (Canceled).

Claim 5 (Original): The nucleic acid sequence of claim 1, wherein said serotonin-gated anion channel is MOD-1.

Claims 6-21 (Canceled).

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REMARKS

Claims 1-15 and 17-21 are pending. Claims 2, 4, 6-15, and 17-21 have been withdrawn from consideration. Claims 1, 3, and 5 were provisionally rejected under 35 U.S.C. § 101, and were rejected under 35 U.S.C. § 102. Applicants address each of these rejections as follows.

Claim Amendments

Claim 1 has been amended to recite the definition of a serotonin-gated anion channel found at page 16, lines 5-8, of the specification. As this amendment merely incorporates the definition of a serotonin-gated anion channel, a term which was present in the original claim, into claim 1, this amendment cannot raise new issues. Claims 2, 4, 6-15, and 17-21, which were directed to a non-elected invention, have been canceled.

Rejection under 35 U.S.C. § 101

Claims 1, 3, and 5 were provisionally rejected under 35 U.S.C. § 101 as claiming the same invention as that of claims 1, 3, and 5 of co-pending U.S. Patent Application No. 09/559,622 ("the '622 application"). Applicants note that in the Supplemental Amendment filed on September 9, 2003 in the '622 application, Applicants canceled claims 1, 3, and 5. In an Advisory Action mailed on November 19, 2003 in the '622 application, the Office stated that the amendments set forth in the September 9<sup>th</sup> Supplemental Amendment will not be entered as they raise new issues.

Applicants hereby affirm that they intend to cancel claims 1, 3, and 5 in the '622 application.

Rejection under 35 U.S.C. § 102(b)

Claims 1, 3, and 5 were rejected under 35 U.S.C. § 102(b) as being anticipated by Blakely et al. (*Nature* 354:66-70, 1991; "Blakely"), Corey et al. (*Proc. Natl. Acad. Sci. USA* 91:1188-1192, 1994; "Corey"), Demchyshyn et al. (*Proc. Natl. Acad. Sci. USA* 91:5158-5162, 1994; "Demchyshyn"), Olde et al. (*J. of Molecular Neuroscience* 8:53-62, 1997; "Olde"), and Ramamoorthy et al. (*Proc. Natl. Acad. Sci. USA* 90:2542-2546, 1993; "Ramamoorthy"). In particular, the Office states:

Olde *et al.*, Ramamoorthy *et al.*, Demchyshyn *et al.* and Blakely *et al.* do not teach the specific nucleic acid sequence taught in the specification for mod-1 isolated from *C. elegans*, however given the breadth of the instant claims encompassing any variant, the various serotonin transmembrane transporters/receptors taught by the cited references would anticipate the invention as instantly claimed ... In light of the breadth of the present claims, the polynucleotide sequences taught by Demchyshyn *et al.*, Corey *et al.*, Olde *et al.*, Ramamoorthy *et al.* and Blakely *et al.* meet the limitations of the claims and thus, anticipate claims 1, 3, and 5.

Applicants disagree for the following reasons.

To anticipate a claim, the prior art has to teach each and every element set forth in that claim. Applicants have amended claim 1 to recite the definition of a "serotonin-gated anion channel" as provided in the specification at page 16, lines 5-8. A serotonin-gated anion channel, as defined in Applicants' specification, and as recited in claim 1, is a

channel which is regulated by serotonin binding and permits the passage of anions from one side of a membrane to the other.

None of the cited references teaches a serotonin-gated anion channel. Instead, Blakely, Corey, Demchyshyn, Olde, and Ramamoorthy teach serotonin transporters and G-protein-coupled serotonin receptors. These proteins are not serotonin-gated anion channels that permit the passage of anions from one side of a membrane to the other and, therefore, do not meet the limitations of claim 1. The 35 U.S.C. § 102 rejection of claim 1, and its dependent claims, should be withdrawn.

#### Assertion of Small Entity Status

Applicants hereby assert that the present application is entitled to small entity status under 37 C.F.R. § 1.27(c)(1).



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CONCLUSION

Applicants submit that the application is in condition for allowance and such action is respectfully requested.

Enclosed is a petition to extend the period for replying for three months, to an including December 15, 2003, as December 13<sup>th</sup> was a Saturday, as well as a check in payment, as a small entity, of the required fee. Also enclosed is a Notice of Appeal, in which Applicants respectfully appeal the final rejection of the pending claims.

If there are any other charges or any credits, please apply them to Deposit Account No. 03-2095.

Respectfully submitted,

Date: 15 December 2003

JAN. N. TITTEL FOR  
Kristina Bieker-Brady, Ph.D.  
Reg. No. 39,109

JAN. N. TITTEL, Ph.D.  
Reg. No. 52,290

Clark & Elbing LLP  
101 Federal Street  
Boston, MA 02110  
Telephone: 617-428-0200  
Facsimile: 617-428-7045